



PATENT ABSTRACTS OF JAPAN

(11) Publication number: **10048582 A**

(43) Date of publication of application: 20 . 02 . 98

(51) Int. Cl.
G02F 1/03
H04B 10/152
H04B 10/142
H04B 10/04
H04B 10/06

(21) Application number: 08209650

(22) Date of filing: 08 . 08 . 96

(71) Applicant: MITSUBISHI ELECTRIC CORP

(72) Inventor: SHIMIZU KATSUHIRO
 MIZUOCHI TAKASHI
 KITAYAMA TADAYOSHI

(54) MODULATION DEVICE, TRANSMISSION DEVICE, MODULATION METHOD, AND COMMUNICATION SYSTEM

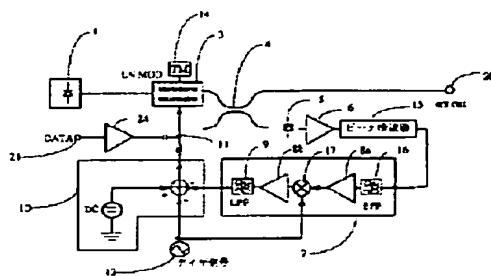
signal.

COPYRIGHT: (C)1998,JPO

(57) Abstract:

PROBLEM TO BE SOLVED: To achieve an optical modulation device capable of suppressing deterioration of transmission signal in quality caused by drift of a working point of a modulation device, by adding dither signal on a bias voltage of an optical modulation device.

SOLUTION: This optical modulation device comprises a source of light 1, an optical modulator 3, a modulator driving circuit 24, a dither signal generator 12, a peak detector 15 for detecting a low frequency dither signal from output signal, a synchronous detection circuit 7 for detecting synchronization of the dither signal generated from the low frequency and dither signal detected in the peak detector 15, and a bias circuit 10 for controlling a bias applied to the optical modulator 3 according to the result of the synchronization detection by the synchronous detection circuit 7. And, adding a low frequency signal on the bias makes it easily possible to control the operation of the modulator even in modulating a high frequency



Best Available Copy